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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.
700 LAVACA, SUITE 800
AUSTIN, TX 78701

EXAMINER

PEIKARI, BEHZAD

ART UNIT PAPER NUMBER

2189

DATE MAILED: 06/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/736,272

Applicant(s)

HANAVAN, ERNEST PATRICK

Examiner

B. James Peikari

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 6 and 18-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Aultman (US PG PUB 2005/0021869).

3. As per claim 1, Aultman describes a storage area network (SAN) (Note that the SAN is a sub-network incorporated within and connected to the larger EBR network, as shown in Figure 12, wherein the SAN comprises the storage devices and is incorporated in and throughout EBR 100, with a switch at Ref 90; see also paragraphs [0064] and [0101]), comprising:

one or more host servers (Fig 12, Ref 30, 128, 36, 118, 120, 39), wherein one of the host servers comprises a backup server (Fig 12, Ref 128);

a plurality of storage devices (Fig 12, Ref 34, 66);

a SAN fabric comprising one or more fabric devices configured to couple the one or more host servers to the plurality of storage devices (Fig 12, Ref 90);

wherein one or more of the host servers are configured to store primary data on one or more of the storage devices (Fig 12, Ref 119, 120, 39), and wherein backup data of the primary data is stored on one or more of the storage devices (Fig 12; Ref 66);

wherein one or more of the storage devices comprise one or more archival storage devices (Fig 12, Ref 34), and wherein the backup server is configured to initiate a server-free backup through the SAN fabric of said backup data to one or more of the archival storage devices (Fig 12, Ref 36, 63; Paragraph 101).

4. As per claim 2, Aultman discloses the SAN as recited in claim 1, further comprising a data mover, wherein the data mover is configured to copy the backup data to the one or more archival storage devices in response to a server-free copy command (Fig 12, Ref 128).

5. As per claim 3, Aultman discloses the SAN as recited in claim 1, wherein the backup server (Fig 12, Ref 36) is configured to copy primary data from one of the one or more storage devices to another of the one or more storage devices to create a backup copy of the primary data (Fig 12, Ref 66)

6. As per claim 4, Aultman discloses the SAN as recited in claim 1, wherein the backup server is configured to initiate a third party copy (3PC) function to create a

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backup copy of the primary data [As applicant discloses, a third party copy is a server-less copy operation (Fig 36, Ref 63)].

7. As per claim 6, Aultman discloses the SAN as recited in claim 1, wherein the backup data is stored on disk drive type storage devices (Fig 12, Ref 66)

8. As per claim 18, please see rejection of claim 1 above.

9. As per claim 19, please see rejection of claim 6 above.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aultman as applied to claim 1 above, and further in view of Tamer (US Patent 6,035,412).

13. As per claim 5, Aultman discloses the SAN as recited in claim 1.

Aultman does not expressly disclose the SAN wherein the backup server is configured to update a backup database in response to the completion of the server-free backup to the archival storage devices.

Tamer discloses a backup server configured to update a backup database in response to the completion of the server-free backup to the archival storage devices (Col 2, Lines 24-28).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate updating a backup database after completion of backup of Tamer into the system of Aultman, since Aultman and Tamer form the same field of endeavor, namely data backup, since this would allow for exact mirroring of the primary server in the backup server (Tamer, Col 2, Lines 26-28), which would provide greater fault tolerance.

14. Claims 7-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aultman as applied to claim 1 above, and further in view of Tamer (US Patent 6,035,412).

15. As per claim 7, Aultman and Tamer disclose a method, comprising:
identifying backup data to be copied to an archive storage, wherein the backup data is a
backup of primary data in a storage area network (SAN) [Since the mirroring of
the enterprise takes places, data to be copied must be identified, a SAN is used to
connect the various servers (Fig 12)];

Aultman does not disclose the process by which archiving occurs. Tamer
discloses a method, comprising.
freezing the backup data to prevent the backup data from being altered (Col 2, Lines
14-19);

while the backup data is frozen, performing a server-free copy through the SAN of the
backup data from one or more storage devices storing the backup data to the
archive storage [Tamer discloses copying data to a tertiary storage while backup
data is frozen (Col 2, 22-24); Aultman further discloses archiving using a server-
free copy (Fig 12, Paragraph 101, 60, 61)]; and
after completing the server-free copy, thawing the backup data so that the backup data
may again be altered (Tamer, Col 2, 24-28).

16. As per claim 8, Aultman and Tamer disclose the method as recited in claim 7,
wherein a backup server identifies the backup data to be copied to the archive storage
(Aultman, Fig 12, Ref 36), freezes the backup data to be copied, initiates the server-free
copy of the data, and in response to the completion of the server-free copy, thaws the
backup data [In the system of Aultman, the backup server controls all copying

(Paragraph 97), thus the backup server would handle the freezing and thawing operations as described by Tamer (Col 2, Lines 14-28)..

17. As per claim 9, Aultman and Tamer disclose the method as recited in claim 7, Aultman further discloses the system wherein a data mover copies the backup data to the archive storage devices in response to a server-free copy command (Fig 12, Ref 128).

18. As per claim 10, Aultman and Tamer disclose the method as recited in claim 7, Tamer further discloses a backup server configured to update a backup database in response to the completion of the server-free backup to the archival storage devices (Col 2, Lines 24-28).

19. As per claim 11, Aultman and Tamer disclose the method as recited in claim 7, Aultman further discloses the method wherein the backup server (Fig 12, Ref 36) is configured to copy primary data from one of the one or more storage devices to another of the one or more storage devices to create a backup copy of the primary data (Fig 12, Ref 66)

20. As per claim 12, Aultman and Tamer disclose the method as recited in claim 7, Aultman further discloses the method, wherein the backup data is stored on disk drive type storage devices (Fig 12, Ref 66)

- 21. As per claim 13, please see rejection of claim 7 above.
- 22. As per claim 14, please see rejection of claim 11 above.
- 23. As per claim 15, please see rejection of claim 9 above.
- 24. As per claim 16, please see rejection of claim 10 above.
- 25. As per claim 17 please see rejection of claim 12 above.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the archiving process of Tamer into the system of Aultman, since Aultman and Tamer form the same field of endeavor, namely data backup, since this would allow for consistently mirrored backup server providing greater fault tolerance.

Response to Arguments

- 26. Applicant's arguments filed on April 4, 2006 have been fully considered but they are not persuasive. Applicant's arguments hinge on two aspects of the invention vs. the prior art, neither of which is convincing for at least the following reasons:

(a) On page 2 of the remarks, applicant states, "Applicant's claim 1 refers to three types of data: primary data, backup data, and archive data". However, there is only *one* type of data and applicant's claim simply refers to different copies of that data stored in a primary storage area, a backup storage area and an archival storage area.

(b) Throughout the remarks, applicant argues that the SAN of Aultman et al. does not store these "three types" of data because the backup and archive storage are not "part of the SAN". None of applicant's remarks specify what applicant believes to be the "boundaries" of the SAN, however, it is clear that applicant believes the SAN to be one particular element within Figure 12, whereas the SAN is the entire storage area network within the EBR 100 of Figure 12, as stated in the rejection. A storage area network (SAN) is a high-speed special-purpose network (or sub-network) that interconnects different kinds of data storage devices with associated data servers on behalf of a larger network – in this case, the EBR network. Typically, a storage area network is part of the overall network of computing resources and may extend to remote locations for backup and archival storage, using wide area network carrier technologies such as ATM or SONET. The SAN of the EBR network of Figure 12 is connected via TCP/IP. Thus, contrary to all of the various arguments which hinge on the scope of the SAN, all of the primary, backup and archival storage devices listed above are part of the SAN of EBR 100.

Conclusion

27. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Peikari whose telephone number is (571) 272-4185. The examiner is generally available between 7:00 am and 7:30 pm, EST, Monday through Wednesday, and between 5:30 am and 4:00 pm on Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Reginald Bragdon, can be reached at (571) 272-4204. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'B. James Peikari', with a stylized flourish at the end.

B. James Peikari
Primary Examiner
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6/10/06